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What is claimed is:

- 1 1. An anchor plate for anchoring an intradiscal device to an
2 endplate of a vertebra, the anchor plate comprising:
3 a plate member sized to be positioned within an intradiscal
4 section between adjacent vertebrae; and
5 a plurality of anchoring elements extending from a surface of the
6 plate member, each anchoring element including a distal portion
7 capable of being introduced into the vertebra through the vertebral end
8 plate.
- 1 2. An anchor plate according to claim 1 wherein the anchor plate
2 includes at least 3 anchoring elements.
- 1 3. An anchor plate according to claim 1 wherein the anchor plate
2 has a non-smooth surface.
- 1 4. An anchor plate according to claim 1 wherein the anchor plate
2 has at least one hollow bore.
- 1 5. An anchor plate according to claim 1 wherein at least one of the
2 anchoring elements includes a lumen.
- 1 6. An anchor plate according to claim 1 wherein at least one of the
2 anchoring elements includes a lumen at least 0.5 mm in diameter.
- 1 7. An anchor plate according to claim 1 wherein the anchoring
2 elements extend substantially perpendicular from the anchor plate.

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1 8. An anchor plate according to claim 1 wherein the anchoring
2 elements extend angularly from the anchor plate.

1 9. An anchor plate according to claim 1 wherein the anchoring
2 elements have at least one curved distal end.

1 10. An anchor plate according to claim 1 wherein the anchoring
2 elements have a smooth outer surface.

1 11. An anchor plate according to claim 1 wherein the anchoring
2 elements do not include a thread for screwing the anchoring element
3 into the vertebral.

1 12. An implantable device for insertion into an intradiscal section
2 between adjacent vertebrae, the device comprising:
3 an anchor plate comprising a plate member sized to be
4 positioned within an intradiscal section between adjacent vertebra and a
5 plurality of anchoring elements extending from a surface of the plate
6 member, each anchoring element including a distal portion capable of
7 being introduced into an end plate of one of the adjacent vertebrae; and
8 an intradiscal component coupled to the anchor plate.

1 13. An implantable device according to claim 12 wherein the anchor
2 plate includes at least 3 anchoring elements.

1 14. An implantable device according to claim 12 wherein the anchor
2 plate has a non-smooth surface.

1 15. An implantable device according to claim 12 wherein the anchor
plate have at least one hollow bore.

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1 16. An implantable device according to claim 12 wherein at least one
2 of the anchoring elements includes a lumen.

1 17. An implantable device according to claim 12 wherein at least one
2 of the anchoring elements includes a lumen at least 0.5 mm in
3 diameter.

1 18. An implantable device according to claim 12 wherein the
2 anchoring elements extend substantially perpendicular from the anchor
3 plate.

1 19. An implantable device according to claim 12 wherein the
2 anchoring elements extend angularly from the anchor plate.

1 20. An implantable device according to claim 12 wherein the
2 anchoring elements have at least one curved distal end.

1 21. An implantable device according to claim 12 wherein the
2 anchoring elements have a smooth outer surface.

1 22. An implantable device according to claim 12 wherein the
2 anchoring elements do not include a thread for screwing the anchoring
3 element into the vertebral.

1 23. An implantable device according to claim 12 wherein the
2 intradiscal component includes a spacer.

1 24. An implantable device according to claim 12 wherein the
2 intradiscal component includes a cage having a first side for positioning
3 adjacent a first vertebra and a second side for positioning adjacent a

1 second vertebra, the first side including a plurality of holes through
2 which the anchoring elements on the anchor plate can be positioned,
3 and the second side including at least one hollow bore.

1 25. An implantable device according to claim 12 wherein the
2 intradiscal component includes an artificial disc.

1 26. An implantable device according to claim 12 further includes at
2 least one channel.

1 27. An implantable device for insertion into an intradiscal space
2 between adjacent vertebra, the device comprising:

3 a first anchor plate comprising a plate member sized to be
4 positioned within an intradiscal section between adjacent vertebra and a
5 plurality of anchoring elements extending from a surface of the plate
6 member, each anchoring element including a distal portion capable of
7 being introduced into an end plate of one of the adjacent vertebrae;

8 a second anchor plate comprising a plate member sized to be
9 positioned within an intradiscal section between adjacent vertebra and a
10 plurality of anchoring elements extending from a surface of the plate
11 member, each anchoring element including a distal portion capable of
12 being introduced into an end plate of one of the adjacent vertebrae; and

13 an intradiscal component coupled to the first and second anchor
14 plates.

1 28. An implantable device according to claim 27 wherein the
2 intradiscal component includes a spacer.

1 29. An implantable device according to claim 27 wherein the
2 intradiscal component includes a cage having a first side for positioning

1 adjacent a first vertebra and a second side for positioning adjacent a
2 second vertebra, the first side including a plurality of holes through
3 which the anchoring elements on the first anchor plate can be
4 positioned, and the second side including a plurality of holes through
5 which the anchoring elements on the second anchor plate can be
6 positioned.

1 30. An implantable device according to claim 27 wherein the
2 intradiscal component includes an artificial disc.

1 31. An implantable device according to claim 27 wherein the device
2 further includes at least one channel.

1 32. A method for attaching an anchor plate to one of the end plates
2 of adjacent vertebrae, the method comprising:
3 creating a space between adjacent vertebrae;
4 inserting into the space created an anchor plate comprising a
5 plate member sized to be positioned within the space and a plurality of
6 anchoring elements extending from a surface of the plate member, each
7 anchoring element including a distal portion capable of being introduced
8 into an end plate of one of the adjacent vertebrae; and
9 causing the anchoring elements on the anchor plate to be
10 introduced into the vertebrae through the vertebral end plate.

1 33. A method according to claim 32 wherein at least one of the
2 anchoring elements includes a lumen.

1 34. A method according to claim 32 wherein the anchor plate
2 includes at least one hollow bore.

1 35. A method according to claim 32 wherein causing the anchoring
2 elements to be introduced into the vertebrae is achieved by applying a
3 force to the anchor plate approximately perpendicular to a plane of the
4 end plate so as to cause the anchoring elements on the anchor plate to
5 be introduced into the vertebra through the vertebral end plate.

1 36. A method according to claim 32 wherein causing the anchoring
2 elements to be introduced into the vertebrae is achieved without rotating
3 the anchoring elements.

1 37. A method according to claim 32 wherein causing the anchoring
2 elements to be introduced into the vertebrae is achieved without first
3 creating one or more holes in the vertebrae for the anchoring elements.

1 38. A method for anchoring an implantable device within an
2 intradiscal section between adjacent vertebrae, the method comprising:
3 creating a space between adjacent vertebrae;
4 inserting into the space created an implantable device comprising
5 an anchor plate comprising a plate member sized to be positioned within
6 the space and a plurality of anchoring elements extending from a
7 surface of the plate member, each anchoring element including a distal
8 portion capable of being introduced into an end plate of one of the
9 adjacent vertebrae, and an intradiscal component coupled to the anchor
10 plate; and
11 causing the anchoring elements on the anchor plate to be
12 introduced into the vertebrae through the vertebral end plate.

1 39. A method for anchoring an implantable device within an
2 intradiscal section between adjacent vertebrae, the method comprising:
3 creating a space between the adjacent vertebrae;

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1 inserting into the space created an implantable device comprising
2 a first anchor plate comprising a plate member sized to be
3 positioned within the space and a plurality of anchoring elements
4 extending from a surface of the plate member, each anchoring
5 element including a distal portion capable of being introduced into
6 an end plate of one of the adjacent vertebrae,

7 a second anchor plate comprising a plate member sized to
8 be positioned within the space and a plurality of anchoring
9 elements extending from a surface of the plate member, each
10 anchoring element including a distal portion capable of being
11 introduced into an end plate of one of the adjacent vertebrae, and
12 an intradiscal component coupled to the first and second anchor -
13 plates; and

14 causing the anchoring elements on the first and second anchor
15 plates to be introduced into the adjacent vertebrae through each of the
16 vertebral end plates.

1 40. A method according to claim 39 wherein causing the anchoring
2 elements to be introduced into the vertebrae is achieved by
3 simultaneously extending the anchoring elements of the first and second
4 anchor plates into the vertebral end plates.

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